DRAFT

EXPENSE RATIOS AND OPERATING COST INCREASES OF BERKELEY APARTMENTS

DRAFT

INSTITUTE OF GOVERNMENTAL STUDIES LIBRARY

DEC 03 1999

UNIVERSITY OF CALIFORNIA

John Gruenstein
Denise Rachel Lai
BPA ECONOMICS
September 25, 1989

This report was prepared pursuant to a resolution by the Berkeley Stabilization Rent Board authorizing a study of apartment operating costs.

The purpose of the study is to provide technical assistance to the Rent Board in determining the 1989 general adjustment.

ACKNOWLEDGEMENTS

The authors would like gratefully to acknowledge the assistance of Richard Lai, Claudia Alexander, Dan Lambert, Carolee Peterson, Sasha Gottfried, Patricia Spikes-Calvin and Ursula Watson in the preparation of this report.

TABLE OF CONTENTS

EXECUTIVE SUMMARY i

I. INTRODUCTION. 1-1
Purpose of the Report 1-1
Legal and Historical Background 1-1

II. METHODOLOGIES FOR CALCULATING ANNUAL GENERAL ADJUSTMENTS. . . 2-1
Generally Used Methods. 2-1
Calculation of the Rent Increase. 2-3

III. OPERATING EXPENSE RATIOS. 3-1
Methods of Calculating Operating Expense Ratios 3-1
Data Sources. 3-4
Findings for Individual Operating Expense Items 3-8
Recommendations for Operating Expense Ratios. 3-13

IV. OPERATING COST INCREASES SINCE JULY 1988. 4-1
Estimating Increases in Operating Costs 4-1
1. Water. 4-2
2. Sewer Treatment. 4-4
3. Sewer Service. 4-5
4. City Business License Fee. 4-5
5. Library Assessment 4-6
6. Refuse Collection. 4-7
7. Property Tax 4-6
8. Insurance. 4-7
9. Management 4-8
10. Maintenance. 4-9
11. Landscaping and Park Maintenance Assessments . . . 4-10
12. Street Lighting Assessment 4-11
13. Rent Board Registration Fee. 4-11
14. School Property Assessment (Measure H) 4-11
15. Fire Inspection Fee. 4-12
16. EBMUD Wet Weather Fees 4-12
17. Gas. 4-12
18. Electricity. 4-13

The Overall Rent Increase Required to Cover Operating Cost Increases. 4-15

V. CONCLUSIONS 5-1

EXPENSE RATIOS AND OPERATING COST INCREASES OF BERKELEY APARTMENTS

EXECUTIVE SUMMARY

PURPOSE OF REPORT

The purpose of this report is to provide the Berkeley Rent Board and the public with (1) estimates of the average ratio of various operating expenses to rental income; (2) estimates of operating cost increases for Berkeley apartments that occurred between July 1988 and the present; and (3) estimates of the amount of the rent increases required to cover each of these operating cost increases.

While the calculations of rent increases required to cover increases in costs implicitly provide a recommendation to the Rent Board about the size of the increase, it is not the prerogative of this report to determine what general adjustment would be "fair". Residents hold varying views about the law regarding rent increases, the factors to be considered in setting general adjustments, and whether rent increases should be more, less, or equal to the amount necessary to cover operating cost increases. There has been continuing debate over whether past general adjustments have been more or less than reasonable. These questions involve issues which are beyond the scope of this report.

It should be understood that the operation of the ordinance and the policies of the board determine how the data in this report may be used. If this study were used in the context of a different annual general adjustment standard, it would lead to differing results, based on such factors as whether the standard also includes a net operating income adjustment.

Operating Expense Ratios

Three data sources were used to provide updated estimates of operating expense ratios: a random sample of 282 Berkeley properties, a sample of 158 Individual Rent Adjustment (IRA) petitions, and the experience reports of apartment building operating expenses compiled by the Institute of Real Estate Management (IREM).

Table ES-1 shows the operating expense ratios calculated from each of the separate data sources and using last year's percentage increases as input to the Ratio Recalculation Formula method. Preliminary recommendations for the operating cost ratios for each expense item are shown in the fifth column of the table, with the source for each recommended ratio shown in the sixth column. Two principles were used to arrive at these recommendations:

1. The data source should be as accurate and as free of biases as possible.
2. The data source should reflect the experience of Berkeley rental properties as closely as possible.

Table ES-2
Overall Rent Increases Required to Cover Operating Cost Increases

Expense	Ratio		Pct. Increase in Expense		Pct. Rent Increase Required
Water (drought consumption)	.013	x	0.0%	=	0.0%
Sewer Treatment	.011	x	5.9%	=	0.7%
Sewer Service	.042	x	-27.4%	=	-1.15%
City Bus. License	.011	x	3.0%	=	0.03%
Library Assessment	.008	x	62.7%	=	0.50%
Refuse Collection	.033	x	0.0%	=	0.0%
Property Taxes	.072	x	2.0%	=	0.14%
Insurance	.065	x	4.7%	=	0.31%
Management	.095	x	5.1%	=	0.48%
Maintenance	.086	x	5.1%	=	0.44%
Landscaping & Park Maintenance	.014	x	6.4%	=	0.09%
Street Lighting	.004	x	0.0%	=	0.0%
Rent Board Registration Fee	.019	x	25.0%	=	0.48%
School Tax (Measure H)	.017	x	4.8%	=	0.08%
Fire Inspection Fee	.005	x	0.0%	=	0.0%
Mosquito Abatement	.00006	x	*	=	0.00006%
Paramedical Care	.002	x	*	=	0.002%
Vector Control	.001	x	*	=	0.001%
EBMUD Wet Weather	.005	x	0.0%	=	0.0%
Gas (hot water only)	.017	x	10.6%	=	0.18%
Electricity (common areas only)	.022	x	14.4%	=	0.32%
TOTAL					2.6%

Table ES-2 [continued]

Expense	Ratio		Pct. Increase in Expense		Pct. Rent Increase Required
			Mastered Metered Buildings		
Gas heat and hot water	.067	x	21.8%	=	1.46%
Electricity (all)	.056	x	16.9%	=	0.94%
City Business License	.011	x	3.5%	=	0.04%
TOTAL					**4.5%**

*These items were left out of previous AGA calculations. Therefore the percent rent increase required to cover the cost equals the expense ratio itself.

For the publicly available data, such as taxes and fees, the random sample best meets these criteria. In addition, for gas and electricity expenses, since rate schedules are known precisely, and good data on consumption were available, it was possible to calculate average costs for these items, which could then be calculated as a percentage of the average rent from the random sample, which again produces a high degree of precision. In the case of management, maintenance, and insurance expenses, since no data were available from the random sample, the data which were most relevant to Berkeley were from the IRA petitions. In addition, this sample was much larger than the samples used for the IREM. The IREM data were also biased toward larger buildings, which makes it less relevant to Berkeley. Finally, for the water and sewer figures, preliminary estimates were not available for either the random sample or the IRA petitions in a form that was directly usable, and so the RFF was relied on.

The recommended ratios are not extremely different from the RFF ratios, as shown in the last column of the table. Although some individual items, such as maintenance, management, rent board fees, and sewer service are quite different, the overall sum of expenses calculated both ways is relatively close. Thus some overshoots, as for maintenance, have been balanced by undershoots, for instance, management.

A second interesting point to note is that although there are large differences between the RFF and the recommended ratios for management, maintenance, and insurance, the three large items that are also the most difficult to calculate for both operating ratios and percentage increases, there is very little difference between the RFF and the recommended ratios for the the sum of the three items. Thus, again, within this smaller group, the undershoots and overshoots from the RFF calculations over the past seven years balance out, at least when judged against the IRA petition data, the source of the recommended ratios for these items.

Apartment Operating Cost Changes

In the past year, increases in most apartment operating costs have varied widely, with some showing no change, and others showing increases far above the rate of inflation. Table ES-2 lays out the changes and also shows what percentage rent increase would be required to cover the cost increases for each item. The calculation of rent increases required in Table ES-2 are based on the operating ratios recommended based on the analysis described in the previous section. Notable features of the information in Table ES-2 include the following:

1. There was no increase in the cost of water, refuse collection, and the fire inspection fee. Although there was no increase in the city business tax rate, the increase in rents collected based on last year's AGA resulted in a 3.0% increase in city business license costs for individually metered buildings and a 3.5% increase in city business license costs for master metered buildings.

2. Expenses for gas rose 10.6% and 21.8% for individually metered and master metered buildings respectively. Expenses for electricity rose 14.4% and 16.9% for individually metered and master metered buildings respectively.

3. Sewer treatment expenses (an EBMUD charge for wastewater treatment) went up 5.9% while sewer service charges (a municipal charge for the maintenance of sewers) decreased by 27.4%. Because the operating expense ratio for the sewer treatment charge is much higher than for the sewer service charge, the increase and decrease in costs balance out in terms of required rent.

4. The Library assessment rose 62.7%.

5. The Rent Board registration fee rose 25%.

The Ordinance

The ordinance states that the board shall consider "...data indicating increases or decreases in the expenses relating to the rental housing market..." (Section 11b). It also states that adoption of an increase greater than 45% of the percentage increase in the Consumer Price Index (CPI) shall require the votes of six of the nine commissioners. (Id.) During the applicable period (June 1988 - June 1989), the CPI for the San Francisco - Oakland Metropolitan Area for All Urban Consumers increased by 5.1%. Forty-five percent of that amount is 2.3%.

As Table ES-2 shows, the overall rent increase needed to cover operating expenses is 2.6% for individually metered buildings and 4.5% for master metered buildings.

I. INTRODUCTION[1]

PURPOSE OF REPORT

The purpose of this report is to provide the Rent Stabilization Board and the public with (1) estimates of the average ratio of various operating expenses to rental income; (2) estimates of operating cost increases for Berkeley apartments that occurred between July 1988 and the present; and (3) estimates of the amount of the rent increases required to cover each of these operating cost increases.

While the calculations of rent increases required to cover increases in costs implicitly provide a recommendation to the Rent Board about the size of the increase, it is not the perogative of this report to determine what general adjustment would be "fair." Residents hold varying views about the law regarding rent increases, the factors to be considered in setting general adjustments, and whether rent increases should be more, less, or equal to the amount necessary to cover operating cost increases. There has been continuing debate over whether past general adjustments have been more or less than reasonable. These questions involve issues which are beyond the scope of this report.

It should be understood that the operation of the ordinance and the policies of the board determine how the data in this report may be used. If this study were used in the context of a different annual general adjustment standard, it would lead to differing results, based on such factors as whether the standard also includes a net operating income adjustment.

LEGAL AND HISTORICAL BACKGROUND

Each year under the Berkeley rent stabilization law, the Berkeley Rent Stabilization Board has the duty of determining what across-the-board increases or decreases (general adjustments) in rents shall be authorized.

Berkeley Rent Stabilization Ordinance

The ordinance states that the board shall consider "...data indicating increases or decreases in the expenses relating to the rental housing market..." It also states that adoption of an increase greater than 45% of the percentage increase in the Consumer Price Index (CPI) shall require the votes of six of the nine commissioners. During the applicable period (June 1988 - June 1989), the CPI increased by 5.1%. Forty-five percent of that amount is 2.3%.

---

[1] In order to maintain consistency, the form of this report and some of the language is taken from reports of prior years.

The portion of the general adjustment section of the ordinance governing the amount and criteria for the general adjustment states:

Section 11. ANNUAL GENERAL ADJUSTMENT OF RENT CEILINGS.

a. Once each year, the Board shall consider setting and adjusting the rent ceiling for all rental units covered by this Ordinance in general and/or particular categories of rental units covered by this Ordinance deemed appropriate by the Board. The Board shall hold at least two public hearings prior to making any annual general adjustment of the rent ceilings. ~~The first such public hearing shall be conducted no later than October 31, 1980, and the first annual general adjustment shall be made no later than December 31, 1980.~~ The Board shall publish and publicize notices of the date, time, and place of the public hearings at least thirty (30) days prior to the hearing date. The two required public hearings shall be conducted and the annual general adjustment shall be set between September 1 and October 31, of each year. The annual adjustment shall become effective the following January 1.

b. In making annual general adjustments of the rent ceiling, the Board shall:

(1) Adjust the rent ceiling upward by granting those landlords who pay for utilities a utility adjustment for increases in the City of Berkeley for utilities.

(2) Adjust the rent ceiling upward by granting landlords a property tax, maintenance and operating expense increase adjustment (exclusive of utilities) for increases in the City of Berkeley for property taxes and maintenance and operating expenses.

(3) Adjust the rent ceiling downward by requiring landlords to decrease rents for any decreases in the City of Berkeley for property taxes.

(4) Adjust the rent ceiling downward by requiring landlords who pay for utilities to decrease rents for any decreases in the City of Berkeley for utilities.

In adjusting rents ceilings under this subsection, the Board shall adopt a formula or formulas of general application. This formula will be based upon ~~a survey or~~ the annual rent registration forms, surveys, information and testimonies presented at public hearings, and other available data indicating increases or decreases in the expenses relating to the rental housing market in the City of Berkeley set forth in this subsection. For maintenance and operating expense adjustments, the Board may also use survey data from surrounding communities where appropriate. The Board shall make no more than one annual adjustment of rent ceilings per rental units per year.

Adoption of a formula greater than forty-five percent (45%) of the increase in the Consumer Price Index for the twelve months ending the previous June 30 shall require the affirmative vote of six (6) Commissioners, other provisions notwithstanding. Adoption of such a formula shall be a specific and special exception to the requirement of only five (5) affirmative votes to make a decision. For the purposes of this subsection, the Consumer Price Index shall mean the Consumer Price Index for all urban consumers in San Francisco—Oakland, all items (1967 equals 100), as reported by the Bureau of Labor Statistics of the U.S. Department of Labor, as it pertains to the City of Berkeley.

1984 State Supreme Court Ruling on the General Adjustment Standard

In October 1983, the California Court of Appeals ruled that the Berkeley ordinance was unconstitutional because its general adjustment mechanism only provided for rent increases adequate to cover operating cost increases without permitting any growth in income. The court concluded that requiring landlords to individually petition in order to realize growth in income was unduly burdensome. Fisher v. City of Berkeley, 195 Cal. R. 836.

In December 1984, the State Supreme Court overturned the Court of Appeals' decision and ruled that the Berkeley Ordinance was constitutional. The court noted that under the ordinance:

> The adjustment for all landlords under section 11 [general adjustments] is designed to allow landlords to retain the same dollar amount of profit in subsequent years that they received in May 1980. In order to acquire rent increases that reflect cost increases not imposed on other landlords generally, or in order to seek an increase in dollar amount of return (i.e., the dollar amount of profit), a landlord must secure an individual adjustment pursuant to section 12 [individual adjustments] ...
>
> (Fisher v. City of Berkeley, 37 C. 3d. 644, 209 Cal. R. 682, 718 (1984)).

In addition, the court rejected the argument that these provisions made the ordinance facially confiscatory.

In February 1986, the U.S. Supreme Court rejected a challenge to the Berkeley rent control ordinance based on anti-trust grounds. (____ U.S. ____, 106 S. Ct. 1045, 1986) it dismissed fair return issues for want of a substantial federal question. (105 S. Ct. 2653, May 28, 1985).

In 1987, the Board adopted an individual adjustment regulation which defined fair return as 1980 net operating income adjusted by 40% of the percentage increase in the Consumer Price Index since 1980.

II. METHODOLOGIES FOR CALCULATING ANNUAL GENERAL ADJUSTMENTS

Rent control ordinances use three principal methodologies for determining general adjustments:

1. Fixed percentage increases
2. Consumer Price Index (CPI)
3. Weighted operating cost (WOC) approach

The Berkeley Rent Board employs the weighted operating cost approach, which will be referred to in this report as the WOC approach or method. The WOC method involves calculating a price index weighted specifically for expenses incurred by apartment owners in Berkeley. Making this calculation requires information about two things:

1. The ratios of individual expense items to overall gross income
2. The percentage change in each expense item

These are combined in a formula which calculates the overall rent increase required to cover changes in operating expenses. Generally, the percentage changes in expense items are calculated from primary data each year, whereas the expense ratios, being more stable, are calculated from primary data only at much longer intervals of time, such as 5-7 years. In the intervening years, the expense ratios are recalculated using the expense percentage changes from the previous year.

GENERALLY USED METHODS

Fixed Percentage

Under some laws, general adjustments are set at the same fixed percentage increase every year (e.g., 5% per year) regardless of general inflation or the changes in apartment operating expenses apartments. The advantage of such an approach is its simplicity. The drawback of using a fixed percentage is that it will not necessarily bear any particular relationship to changes in costs experienced by apartment owners in a particular year.

Consumer Price Index

A second method for setting annual general adjustments is to tie them to an index of general inflation. The index used most often for this purpose is the Consumer Price Index (CPI), published monthly by the U.S. Bureau of Labor Statistics for the nation and for selected metropolitan areas. Within the past few years, for example, Los Angeles and San Francisco have changed their general adjustment standards from a fixed percentage to a percentage of the annual percentage increase in the CPI.

Typically, the most general index -- the Consumer Price Index/all items/all urban consumers -- is used, although other indexes, such as the CPI/urban wage earners, or the CPI/shelter component may be chosen. If the rent-setting jurisdiction is in a metropolitan area for which a separate CPI is calculated (as it is for the San Francisco-Oakland Metropolitan Area), the specific metropolitan area index is generally used. If a specific metropolitan area index is not available for the jurisdiction, either the national index or an index from the closest metropolitan area for which it is calculated can be used.

In some cases the full increase in the CPI is used, and in others a fixed percentage of the increase. One rationale for using a fixed percentage less than 100% is that operating costs represent less than 100% of rents -- typically about 40-50%.

The advantage of the CPI method is that it relies on a single piece of information that is easily and cheaply obtainable by anyone and that is calculated frequently by a long-established branch of the U.S. Government, regarded as objective and uninfluenced by political considerations. Thus, if the CPI is used as the standard for setting rent increases, the appropiateness of using a general measure of inflation may be disputed, but the particular number itself will generally be accepted as measuring what it purports to. The advantage of the CPI method over a fixed percentage is that percentage changes in apartment operating cost increases, like the rate of inflation itself, vary considerably over time and are are likely to be reasonably closely related to general inflation. So allowing a percentage change in rents which varies each year according to market forces is fairer than applying a fixed percentage increase, especially in times of especially low or high inflation.

The drawback of using the CPI as a measure is that the CPI represents a market basket of household goods (including such items as food, medical care and transportation), while apartment operating costs are limited to particular types of expenses. So the CPI is not the most precise indicator of increases in apartment operating costs. Increases in the types of expenses associated with apartments have often been well above or below the rate of increase in the CPI. For example, in California, because of Proposition 13, property tax increases are limited to 2% per year, except when a property is sold. The rate of inflation during the period of this restriction has always been greater than 2%. On the other hand, increases in utility costs (e.g., gas, electricity, water, refuse collection) have been far above the inflation rate in some years.

Weighted Operating Cost Method

The Berkeley Rent Board uses the weighted operating cost approach to provide input to its decision about the Annual General Adjustment. Instead of rigidly fixing the percentage increase in rents or tying the increase to the CPI, Berkeley's rent control ordinance delegates to the Board the authority to determine annual rent increases based on an analysis of increases in apartment operating costs. In essence, the

Board uses a weighted price index for apartment expenses, rather than a general price index like the CPI, as an input to its decision about the Annual General Adjustment (AGA).

While the weighted operating cost approach to estimating increases in apartment operating expenses in principal is more precise than the CPI, it should be noted that actual expense increases for some types of expenses are not known. Therefore, the CPI usually plays a major role in estimating apartment cost increases. Important examples of the use of the CPI in a weighted cost index are the calculations of changes in maintenance and management expenses, which constitute over half of operating expenses. Typically, changes in these items are extremely difficult to estimate directly, so rent boards employing the WOC method will use one of the consumer price indexes to estimate increases in these expenses.

CALCULATION OF THE RENT INCREASE

The weighted operating cost approach requires two types of information to calculate the rent increase necessary to cover operating cost increases. (For simplicity and because it is the general rule, operating cost changes will often be described in this report as increases. But it is important to remember that particular operating costs sometimes decrease. The WOC method works the same way for decreases as it does for increases in operating costs.) First, the percentage increases in individual operating costs such as electricity, sewer service, insurance, management and the like need to be calculated on an annual basis. Second, operating expense ratios --that is, the ratios of each expense item to the overall gross income -- are required. The operating expense ratios are used to decide how much weight to give to the individual operating cost percentage increases when calculating an overall rent increase. So, for instance, if there were a large year-to-year increase in the cost of an item with a relatively small expense weight, like the fire inspection fee, the resulting increment to the overall rent would be smaller than for a comparable increase in an expense item like property taxes which has a much larger expense ratio.

The calculation itself involves four steps:

1. The ratio of each type of operating cost to gross income is estimated;
2. The percentage change in each type of operating cost is estimated. The percentage change may be an increase or a decrease;
3. The ratio of each type of operating cost is multiplied by the percentage change in that operating cost. This step provides an estimate of the rent change necessary to cover that operating cost change.
4. The rent increases necessary for each particular item are summed to obtain an overall rent increase necessary to cover all.

For example, if it is estimated that refuse collection expenses are 40% of gross income (an expense weight of .04), and that refuse

collection expenses have risen 25% over the past year, then a rent increase of 1% is needed to cover the resulting cost increase. The calculation below illustrates how such a calculation is made.

Ratio (Weight)	x	Pct. Increase	=	Rent Increase Required
.04	x	25%	=	1.0%

The 1% rent increase in overall rent is, of course, only sufficient to cover the 25% increase in refuse collection expenses. In order to calculate the overall rent increase required to cover all operating cost increases the rent increases required for all the types of operating expenses are added up.

III. OPERATING EXPENSE RATIOS

As noted in the previous section, the weighted operating cost method requires estimates of the operating expense ratios. These ratios can be calculated in two ways:

1. By calculation from actual dollar data on expenses of rental properties,

2. By updating previous calculated operating expense ratios using the percentage expense increases for each item.

Because of the cost and time involved in primary data collection on actual dollar expense items for a large sample of properties, and because the second method provides a reasonable degree of accuracy, the Berkeley Rent Board last used the former method to calculate operating expense ratios in 1982 and each year since then has used the latter method to update the ratios.

This year's report provides the first recalculation of the operating expense ratios from primary data since 1982. This section describes the methodology, data, and results of that recalculation.

METHODS OF CALCULATING OPERATING EXPENSE RATIOS

The Primary Data approach

The calculation of expense ratio estimates from primary data -- that is, data on actual expenses and rents of rental properties -- requires a substantial amount of information for a sample of properties large enough to provide statistically meaningful results. Further, because sample data are generally derived from property information collected for other purposes, it is necessary to use more than one source of information and various samples in order to compile as complete an accounting as possible of all expense items. The use of more than one data set also provides cross-checks for accuracy and consistency in the expense data.

Because of the effort and time involved in primary data collection, expense ratio studies using primary data are typically not carried out each year. The last calculation of expense ratios for Berkeley apartments was made in September, 1982 by Baar, Keating, and Gellen. The September 1982, general adjustment study included substantial data collection in order to estimate the ratio of various operating expenses to income. A sample of several hundred properties was used in order to estimate property tax, refuse collection, and library tax expense ratios. EBMUD provided data on average water consumption, which was used to estimate water and sewer expense ratios. The September, 1982 study also contained a detailed analysis of the methodologies, issues,

and problems associated with creating a weighted operative cost index for residential rental units.

Each year since 1982, the expense ratios have been updated in a simpler, less expensive way than primary data collection, using a method that may be termed the Ratio Recalculation Formula (RFF) approach. The RFF approach uses the cost increases for expense items from the previous year to calculate expenses for the current year and then divides these expenses by the increased rent allowed by the Rent Board to give current year expense ratios.

The Ratio Recalculation Formula (RFF) approach

The RFF method updates the previous year's operating expense ratios by using the rent increases and cost increases that have occurred since that date. Recalculations of operating cost ratios are made by multiplying the prior ratio by the rate of the cost increase and then dividing that amount by the rate of the rent increase.

An example shows how the method works. Suppose that last year, a particular type of operating expense had an operating expense ratio of .05 -- that is, this expense averaged 5 % of gross income. Suppose further that the cost of this expense item increased by 60%, while overall rents increased only 30%. (The percentage increases for this example have been deliberately chosen to very large compared to actual most actual year-over-year percentage changes.) Given these figures, the operating expense ratio for this item would have increased from .05 last year to .058 this year.

The calculation is shown as follows:

Hypothetical Ratio Recalculation

Prior ratio for this expense item = .05
Percentage rate increase for this item = 50%
Percentage increase in overall rent = 30%

$$\text{New ratio} = \frac{\text{prior ratio} \times (100\% + \text{rate increase})}{(100\% + \text{rent increase})}$$

$$= .05 \times (150\%)/(130\%)$$

$$= .05 \times (1.1538)$$

$$= .058$$

The RFF method has been used in this report to provide a set of updated operating expense ratios for comparison with the ratios derived from primary data.

While in principle the RFF method provides an exact formula that can produce accurate recalibration of the expense ratios, there are several reasons why it is important periodically to recalculate the expense ratios from primary data. First, the cost increases themselves are never known with total precision and in some cases are based on fairly general data from the CPI where specific Berkeley data are unavailable. Relatively small deviations from perfect accuracy can therefore cumulate year after year in the expense ratio calculations using the RFF approach, particularly if there is a systematic tendency to overestimate or underestimate changes in a particular expense item.

A second reason to periodically recalibrate with primary data is that the there will be changes over time in the quantities consumed of such items as gas, electricity, sewer service, maintenance, etc. These changes in quantities are not accounted for in the formula that updates the expense ratios, only the change in price. So, for instance, if the price of electricity were to rise steeply and landlords with common area meters were to cut back on the consumption of electricity in these common areas (for example, by lowering bulb wattages), the overall percentage increase in common area electricity expenses would be less than the increase in electricity prices. Quantities consumed may change for reasons other than price changes, such as changes in incomes, technology, tastes, advertising, or "moral suasion" applied by a public agency (for example, EBMUD's advertising campaign to encourage people to reduce water consumption).

Periodic recalibration of weights in a fixed-weight index of the type used by the Rent Board is a standard practice in calculating price indexes. The weights for the Consumer Price Index (CPI) are periodically recalculated by the U.S. Government through the use of the Consumer Expenditure Survey.

The recalibration provides important information in addition to the new expense weights themselves. Where possible, updated average consumption information for utility usage is gathered, and this can be used directly in the AGA calculations in subsequent years. Consumption data are particularly helpful in cases where there are complicated rate structures, such as two-tiered pricing and baseline quantities, all of which may change from year to year.

Recalibration also provides a useful guideline for judging the accuracy of past re-estimates of the expense ratios using the RFF method. Comparison of the estimated expense ratios from the cumulative application of RFF over the period between recalibrations with the expense ratios calculated from the latest recalibration can indicate cases where increases in expenses may have been overestimated or underestimated over time. The Board may want to consider such cumulative under or overshooting in this year's AGA. Finally, comparison of the two sets of results will also give an indication of how frequently recalibration may be need in the future. If the expense ratios calculated by recalibration are very close to the cumulative RFF results this could indicate that the seven year interval between the last and the current recalibration is probably adequate. If the ratios

are far apart, this would indicate a need for more frequent recalibration in the future.

DATA SOURCES

As noted above, recalculation of the operating expense ratios requires substantial amounts of data collection. This section describes the three data sources that were used to recalculate the ratios:

(1) A sample of 158 Individual Rent Adjustment (IRA) petitions filed with the Berkeley Rent Board;

(2) A random sample of 282 properties drawn from the Berkeley Rent Board's "property file";

(3) The experience reports of apartment building operating expenses compiled by the Institute of Real Estate Management (IREM).

Individual Rent Adjustment (IRA) Petitions

Individual Rent Adjustment petitions filed by landlords were used as a source of data for the operationing expense ratio analysis. Only adjudicated petitions containing a net operating income analysis were used, and the total data set was 158 decisions, between 1985 and the present. The legal reason for the petition was not examined.

The net operating income analysis contains total gross potential income for the units or properties in question, the total number of units covered by the petitions, and dollars expended annually on several categories of items. The allowable charges examined under the recurring expense items include: electricity, gas, water, refuse collection, insurance, maintenance, advertising, accounting, legal, real estate taxes, registration fees, self-labor, maintenance self-labor, management self-labor, and "other". There is a ceiling of five percent of gross potential income for management. There are strict guidelines, amended yearly, on the rates which are allowed for skilled and unskilled labor under maintenance. All claimed items must be proven expenses with receipts or other proof of payment. Tenants are allowed to present evidence refuting the claims of the landlord, and many decisions represent compromises between landlord and tenant or landlord and hearing examiner.

In many cases, there were zeros listed under items in the petitions, which frequently proved to mean "not available/applicable". Table III-2 shows both the dollars expended on each item in the sample, and the percentage of total income expended on each item. The table includes two sets of analyses: one set with records with zeros included and one set with records with zeros for a particular expense item deleted for the analysis of that expense item. For example, thirty properties listed "legal expenses," as an item, and only those thirty properties were examined to establish 1.4% expenditure on this particular item. The sample size for each item in the examination

without the zeros is different for every category depending on how many petitions claimed the expense item. The medians for each expense item are also shown. The median is defined as the middle occurring value from the sample, so a different property is likely represented in each category. The median is less sensitive to the extremes of the sample than the mean (which might be significantly altered by the presence of very large properties or very low income properties).

Two further categories require some explanation. The refuse collection charges are usually charged to the property tax bill, and frequently, there were zeros listed in this category. As the landlord is legally responsible for the refuse collection charges, it is likely that these were simply included in the property tax category. This would tend to bias the sample upward in the property tax category, and it would tend to bias the sample downward in the refuse collection category.

There are some categories which appear in the IRA net operating income analysis which are important for the hearing examiner but which play no role in this expense ratio analysis. For example, the hearing examiner distinguishes between self-labor for management or maintenance and purchased services for those expense items. Further, the self-labor category is often not described in enough detail for this analysis to distinguish between maintenance and management services. Therefore, the expense for self-labor in management and maintenance were added to the general categories on management and maintenance, and the self-labor which was not assigned was distributed to the appropriate categories in the proportion that self-labor management occurred with respect to self-labor maintenance.

Another category which was pooled for the purposes of comparison with other data sources is "other". "Other" in the IRA petitions is frequently security, safety equipment, or parking improvements (all of which are considered non-capital improvements) and often, there was no explanation of the expense in the decision. The IRA categories of advertising, accounting, and legal expenses appear separately, but in Table III-7, these items have been pooled into the "other" category for comparison.

It must be pointed out that this sample represents landlords whose expenses have not been covered under the annual general adjustment offered by the Rent Stabilization Board, and this presents a bias in this sample.

Random Sample

A random sample of 400 properties was drawn from the Berkeley Rent Stabilization Board's "property file", which is a database of all properties within the City of Berkeley which list more than one residence on the parcel or which are registered with the Rent Stabilization Board as rental properties. Information was then obtained about the properties from the "unit file," a corresponding database which lists information about each registered rental unit in the city.

Eighty-eight properties were eliminated because there was no information about them in the unit file.

The information available in the unit file was updated in the following pattern to create a data base of 1989 rents and expenses. Some units were or are exempt from the rent control ordinances because they are owner occupied, owner's family occupied, or Section Eight Housing. Therefore, many units from the sample might not have current registration. Rent levels were established in the following hierarchy. The 1989 registered rent was accepted if present. In the absence of this rent level, the 1987 rent was accepted and the annual general adjustments for 1988 and 1989 were applied to this amount. In the absence of both the 1989 and 1987 rents, the 1979 registered amount was taken and all annual general adjustments were applied to the rent. In the absence of any of these three years rents, the rent level for the most recent registered year was taken, and the intervening annual general adjustments were applied. A total of seven parcels had no information about rent in the units file, and these were deleted from the sample. (1987 and 1979 are the years in which the rents were verified by the Rent Stabilization Board, and data from these years are considered more reliable than from other years.)

It was discovered in the process of data collection that refuse collection charges are charged on the county tax roll for residential properties. If no charge for refuse collection was listed, it is a very strong indication that the primary producer of refuse is commercial, and the user is billed separately by month. Any property in the sample which had no charge for refuse was deleted from the sample because the taxes applied to primarily commercial properties and the expenses incurred by them are substantially different than in primarily residential rental property. After all deletions, there is a total data set of 282 properties.

IREM Data

The Institute of Real Estate Management's (IREM) publication, Income/Expense Analysis for Conventional Apartments, is a compilation of the operational data of approximately 10,000 buildings and developments. The income and expense figures reported in the publication are represented as medians or ranges in an effort to provide a more accurate reflection of the diversity of operating experiences than is possible with a simple average. The analyses contained in the publication are grouped by building type: Low-Rise (12-24 Units), Low-Rise (25 or More Units), and Garden Type. Data are collected for each of these metropolitan areas, selected regions of the United States and Canada, selected age groups, and selected age groups within the larger metropolitan areas. The choice of metropolitan areas reported was determined by sample size, with certain regions being combined to insure a sufficient number of observations.

The sources of the financial data in the publication are IREM's Certified Property Manager members and other real estate professionals involved with the fiscal management of multi-unit properties. Data

collection forms are distributed at the beginning of each calendar year with reporting deadline of March 31. A submitted property must meet the following criteria in order to be included in the sample: 1) the building or group of buildings must contain a minimum of 12 residential units; 2) the building's office or store occupancy may not represent more than 20% of the total rentable area; and 3) the building must have been in operation for a full 12 months in the calendar year reported.

There has been change in the Income/Expense Analysis: Apartments publications which may affect the comparability of data in the editions between 1977 to 1988. IREM published the first edition of its Income/Expense Analysis: Federally Assisted Apartments in 1986. In order to differentiate between apartment surveys, the initial study was renamed Income/Expense Analysis: Conventional Apartments. Over a thousand properties formerly included in the general apartment database have been included in the federally assisted apartment sample in the editions since 1986.

The IREM analysis does not directly lend itself to strict examination of expense ratios for two reasons. First, and most importantly, the IREM data are based on median percentages and median dollars per square foot. By using the median (middle value from a series) rather than means (averages across a series), the sum totals generated may not add up to one hundred percent. For example, in the case of the percent or dollars per square foot for one expense item, the median building used may be different than for another expense item. Secondly, the data items collected by the IREM do not exactly correspond to the items collected by the IRA sample. Therefore a series of adjustments have been made.

First, the data from the expense categories have been "normalized". This process compresses the data items using the median dollars per square foot calculations. The total of all median expense items is calculated, and to this sum is added the median net operating income and the median loss of revenue due to vacancy. This generates a normalized gross income which aggregates to one hundred percent. From this total, the percent expended on each expense item is then calculated.

Second, the data items which did not directly conform to the other data sources' structures were pooled into comparable categories. There are virtually no landlords in Berkeley who use heating oil, and this category was deleted. The water expenses were pooled, irrespective of whether the amounts were for common use areas or not. Items such as property taxes, insurance and management were directly comparable. The IREM does list a number of items which have been pooled into the "other" category--including supplies, security, recreational amenities, building services, other administrative, other operations, and other payroll. The IREM also lists grounds maintenance, repairs, and painting and decoration separately, and these items were pooled into the general category of maintenance.

FINDINGS FOR INDIVIDUAL OPERATING EXPENSE ITEMS

This section details the findings for each expense item. Different data sources included data on different items because of data availability and different degrees of aggregation. Table III-1 shows which data items were available on each data source.

Tables III-2 through III-4 show the results of the calculation of the operating expense ratios for each data source. Operating expense ratios calculated using the RFF method are shown in Tables III-5 and III-6. Finally, Table III-7 shows the operating expense ratios calculated for each source portrayed together.

Water

Sources: Recalculation, IREM, IRA petitions

Comments: The 1989 recalculation projects that 1.8% of gross potential income will be expended on water charges, and no distinction is made between individual and master meters. The IREM determines 1.0% of income will be spent on water. This percentage is derived from the IREM analysis of water charges for common use and common use and apartments. There is no indication about what percentage of the IREM sample of the apartments have common use only meters; therefore, the two percentages were averaged to make the data comparable to the other sources. The IRA petitions showed a much higher percent expenditure on water, 3.4% of gross potential income. There is an internal bias in the sample, however, originating from the fact that the IRA petitions do not have a separate category for sewer treatment charges. The percentage for water charges probably includes those for sewer treatment as well, and the category represents a combined charge. Likewise, the IREM does not explain whether sewer treatment charges might be found in the water charges or in the "Building Services" category, and the IREM water percentages may also be a combined item.

Sewer Treatment

Source: Recalculation

Comments: The only source for this expense percentage is the recalculation, which shows a 1.1% ratio. It should be noted that the increases for this category were not the same across all types of buildings. For buildings less than five units, there was no increase, and for buildings of five or greater units, the increase was 66%. However, this item is defined by a hypothetical 6 unit building. The percentage is not weighted by building type; therefore, the recalculation is biased. (See Recommendations in Chapter V).

Sewer Service Charges

Sources: Recalculation, Random Sample

Comments: The recalculation found that sewer service charges account for 2.1% of gross potential income. The random sample showed that 4.2% of gross potential income is accounted for by this category. However, it should be noted that there was a disproportionate decrease in the charges assessed. For buildings under five units, there was no change. For buildings of five or more units, there was a 41% decrease in cost owing to the changes made in billing structure. This results in a combined decrease of 27% in the overall category after weighting for building size. In previous years, the billing structure for smaller buildings was on a flat rate per unit basis, and larger buildings paid a flat rate and a volumetric charge as well. On July 1, 1988, this was changed to conform to the billing structure for smaller buildings--a single flat rate.

City Business License

Source: The Berkeley Office of Tax and Licenses defines the rate as $10.81 per $1000 of gross income. So the operating expense ratio is 1.1%.

Library Assessment

Sources: Recalculation, Random Sample

Comments: The recalculation of the Library Assessment Tax shows a rather marked increase in this expense percentage. This stems from the 62.7% increase in these charges made by referendum. The tax records from 1988-1989 do not reflect the increase in the tax, which had not happened at that time; however, the effect of the increase is calculated to result in a 1.3% ratio for this item in the random sample.

Refuse Collection

Sources: Recalculation, IRA petitions, Random Sample

Comments: While the recalculation of the refuse collection expense percentage shows a 3.0% expense ratio, the IRA petitions show a more modest figure of 2.3%. This percentage, however, is not likely to be very accurate, as refuse collection charges are contained within the property tax bills. In many cases, the charges were probably lumped in with the property tax category, and the person filing the petition might not have been overly concerned about this category if it were not the primary reason for his/her application for an IRA. The random sample found the highest percentage at 3.3%. (Any property found in the sample without charges for refuse collection was deleted from the sample entirely because these properties represent ones which are largely commercial producers of refuse. While these properties might have some residential units, the purpose of the property might well be commercial, and this would have seriously biased the sample.)

Property Taxes

Sources: Recalculation, IREM, IRA petitions, Random Sample.

Comments: There is a great disparity in the various sources for the percentage of the gross potential income accounted for by this item. The IREM presents the lowest ratio, 5.1%. This particular data source is not applicable to Berkeley for this item, because it is a different tax district with different items collected on the county tax rolls. The recalculation is 6.1%. The IRA shows a percentage of 11.2%. There are several problems with this particular source. The property tax category for this data source includes every category on the tax roll. Further, many owners, when they buy a property apply for the IRA because as new owners the assessments on their properties is much higher than long-time owners. Therefore, this particular source cannot be considered a reliable indicator of this expense ratio. The random sample shows a significantly higher percentage than the IREM and the recalculation, 7.2%.

Landscaping Tax

Sources: Recalculation, Random Sample

Comments: The recalculation of the expense percentages combines this tax with the street light tax in the recalculation, and this source is not as reliable as the random sample, in any case. The random sample shows a total of 1.4% of gross potential income expended on this tax item.

Street Light Tax

Sources: Recalculation, Random Sample

Comments: The recalculation is problematic because it is combined with the above mentioned category. The random sample shows that the Street light tax accounts for 0.4% of the gross potential income.

Rent Board Registration Fee

Sources: Recalculation, IREM, IRA petitions, Random Sample

Comments: The recalculation assesses registration fees at .8% of gross potential income (which includes the 25% increase in the 1989 figures). The IREM cannot be considered an indicator of expenses within Berkeley, because it is in another jurisdiction, with a separate fee structure. The IRA petitions show that 2.4% of gross potential income is spent on Rent Board registration fees. This may be biased upward because this sample represents landlords whose expenses have outpaced the annual general adjustments. However, the random sample shows that 1.9% of gross potential income is expended on registration fees for

registered units, and this does not include the 1989 increase which would bring the figure to 2.4%.

School Tax

Sources: Recalculation, Random Sample

Comments: The recalculation shows that the school tax (Measure H) should be 2% of the gross potential income, while the random sample shows a total expenditure of 1.7%.

Fire Inspection Fee

Sources: Recalculation, Random Sample

Comments: The recalculation and the random sample both found the expense percentage to be 0.5% of the gross potential income.

Mosquito Abatement

Source: Random Sample

Comments: This expense has not previously been calculated for the expense percentages. The random sample showed that it was .006% of the total gross potential income.

Paramedical Care

Source: Random Sample

Comments: This expense has also not been part of previous calculations, and the random sample shows an expense ratio of 0.2% of the gross potential income.

Vector Control

Source: Random Sample

Comments: This item has not been considered in previous calculations, and the random sample shows an expense ratio of 0.1% of gross potential income.

East Bay Municipal Utilities District Wet Weather Facilities

Source: Random Sample

Comments: This item was previously calculated within the water category for the recalculation of the expense percentages. The expense is presently billed on the county tax roll. The random sample shows the expense to be 0.5% of the gross potential income.

Gas And Electricity

Sources: Recalculation, IREM, IRA petitions, Random Sample

Comments: The recalculation includes components for both master meters and individual meters, and the expense ratios were found to be 2.3% for gas (hot water only), 2.4% for common areas electricity, 5.6% for master metered gas, and 5.4% for master metered electricity. The IREM shows smaller percentages in each category: 1.9% for common areas gas, 1% for common areas electricity, 1.9% for master metered gas, 1.4% for master metered electricity. The IRA petitions do not explain whether the electricity and gas are master metered or individually metered, and these expense percentages are not a reliable indicator of these specific categories. The IRA sample shows that 4.2% of gross potential income is expended on general electricity, and 2.6% of gross potential income is expended on general gas charges.

The random sample could not specifically assess gas and electric charges. Nevertheless, aggregate usage figures are available for the City of Berkeley for the calendar year 1987. From this usage data, mean expenditure can be assessed for gas and electric charges by multiplying by the known 1988-1989 rates. In order to accomplish this, the usage was multiplied by the rate for each month, including summer and winter baseline usages, for mean master meter expenses on gas and electric and mean individual meter charges on gas and electric. The unit data explained whether the landlord registered his/her rental property as including gas and/or electric in the rental charges. From those buildings which claim gas or electric inclusion (calculated separately), the percentage of the income expended on mean usage was determined to be 6.7% for gas and 5.6% for electric. The usage for individual meters (gas and electric) was calculated for the individual meters, and this was taken as a percentage of mean gross potential income for all properties. The individual meter data is primarily comprised of single family dwellings, which cannot be assumed to have the same usage as common areas only electric or gas for hot water only.

Management

Sources: Recalculation, IREM, IRA petitions

Comments: The recalculation assesses the management expense ratio at 6.1% of gross potential income. The IREM shows a ratio of 4.9% of gross potential income, while the IRA petitions show a ratio of 9.5 % of gross potential income. The IRA petition category includes the expense percentage from management specifically, management self- labor, and the assigned general self-labor (see IRA section). The IRA sample can be

expected to be somewhat higher than average because the petitions are being brought by landlords whose expense have not been covered by the annual general adjustments. The IREM ratios have been adjusted for the type of building. This is to say, the IREM divides buildings by garden style (usually small buildings or single family residences), low rise 12 to 24 units, and low rise 25 units or more. The percentage of each kind of building is known for the City of Berkeley, through the Bay Area Economics report, and the expense percentage for all categories including management are weighted in the Berkeley proportions.

Other

Sources: IREM, IRA petitions

Comments: This is not a proposed expense item for the annual general adjustments, and the expenses incurred in this category can be dealt with by IRA petitions. Nevertheless, as both categories are very significant percentages, some explanation is necessary. The IREM has several categories for which there is no easy fit for this analysis. These include: other operating (not maintenance), other administrative (not management), supplies, building security, and recreational amenities. The IRA petitions include parking, building security other (unknown), advertising, accounting, and legal expenses.

RECOMMENDATION FOR OPERATING EXPENSE RATIOS

Table III-7 shows the operating expense ratios calculated from each of the separate data sources and using last year's percentage increases as input to the RFF method. Preliminary recommendations for the operating cost ratios for each expense item are shown in the fifth column of the table, with the source for each recommended ratio shown in the sixth column. Two principles were used to arrive at these recommendations:

(1) The data source should be as accurate and free of biases as possible.

(2) The data source should reflect the experience of Berkeley rental properties as closely as possible.

For the publicly available data, such as taxes and fees, the random sample best meets these criteria. In addition, for gas and electricity expenses, since rate schedules are known precisely, and good data on consumption were available, it was possible to calculate average costs for these items, which could then be calculated as a percentage of the average rent from the random sample, which again produces a high degree of precision. In the case of management, maintenance, and insurance expenses, since no data were available from the random sample, the data which were most relevant to Berkeley were from the IRA petitions. In addition, this sample was much larger than the samples used for the IREM. The IREM data were also biased toward larger buildings, which

makes it less relevant to Berkeley. Finally, for the water and sewer figures, preliminary estimates were not available for either the random sample or the IRA petitions in a form that was directly usable, and so the RFF was relied on.

The recommended ratios are not extremely different from the RFF ratios, as shown in the last column of the table. Although some individual items, such as maintenance, management, rent board fees, and sewer service are quite different, the overall sum of expenses calculated both ways is relatively close. Thus some overshoots, as for maintenance, have been balanced by undershoots, for instance, management.

A second interesting point to note is that although there are large differences between the RFF and the recommended ratios for management, maintenance, and insurance, the three large items that are also the most difficult to calculate for both operating ratios and percentage increases, there is very little difference between the RFF and the recommended ratios for the the sum of the three items. Thus, again, within this smaller group, the undershoots and overshoots from the RFF calculations over the past seven years balance out, at least when judged against the IRA petition data, the source of the recommended ratios for these items.

Table III-1

Data Item by Data Source for the Expense Calculation
(1989)

	IREM	IRA Sample	Random Sample	Aggregated Sources
Electricity	X	X		X
Gas	X	X		X
Water	X	X		
Sewer Treatment	X			
Refuse Collection		X	X	
Insurance	X	X		X
Maintenance	X	X		
Management	X	X		
Advertising		X		
Accounting		X		
Legal		X		
Sewage Treatment			X	
Landscaping Tax	X		X	
Street LIght Tax	X		X	
School Tax	X		X	
Mosquito Abatement			X	
Vector Control			X	
Paramedical Care			X	
EBMUD Wet Weather Facilities			X	
Property Taxes	X	X	X	
Registration Fees	X	X	X	
City Business License	X		X	
Other	X	X		

Table III-2

IRA Expense Analysis

	Not Using 0's as a Value				Using 0's as a Value			
	Mean		Median		Mean		Median	
Number of apartments	8.59 units		4 units		8.59 units		4 units	
Monthly rent collected	$402.43		$342.20		$402.43		$342.20	
	Mean $	Mean %	Median $	Median %	Mean $	Mean %	Median $	Median %
Electricity	$1807.85	4.2%	$702.54	4.2%	732.29	2.2%	0	0
Gas	855.85	2.6%	540.53	3.3%	75.83	0.2%	0	0
Water	1296.31	3.4%	587.00	3.5%	943.39	2.8%	346.50	2.1%
Refuse Collection	1031.21	2.3%	771.60	4.6%	574.35	1.7%	192.50	1.6%
Insurance	1666.79	6.5%	886.04	5.3%	1635.14	4.9%	858.50	5.1%
Repairs/Maintenance	2899.75	8.6%	1771.75	10.7%	3592.84	10.8%	1693.30	10.2%
Advertising	210.21	1.0%	131.25	.8%	18.92	.1%	0	0
Accounting	512.84	1.1%	205.00	1.2%	162.29	.5%	0	0
Legal	492.87	1.4%	202.00	1.2%	93.58	.3%	0	0
Property Taxes	3613.47	11.2%	2202.62	13.3%	3521.99	10.6%	2129.76	12.8%
Rent Board Registration Fee	829.11	2.4%	450.08	2.7%	766.14	2.3%	414.51	2.5%
Management	2675.54	9.5%	1200.00	7.2%	1939.97	5.8%	727.68	4.4%
Other	2384.10	5.8%	382.50	2.3%	452.68	1.4%	0	0
Total Expenses	15141.46	45.6%	8071.00	48.6%	15141.46	45.6%	8071.00	48.6%
Gross Potential Income	33189.75	100.0%	16620.00	100.0%	33189.75	100.0%	16620.00	100.0%

Table III-3

Random Sample Expense Analysis
(Including Aggregated Sources)

	Mean Annual Expenditure	Mean %-Age of Rent	Standard Deviation
Sewer Service	$796.17	4.2%	$1,115.12
City Business License	--	1.1%	--
Library Assessment	$145.69	0.8%	$165.80
Refuse Collection	$632.29	3.3%	$694.06
Property Taxes	$1,359.96	7.2%	$1,427.01
Landscaping	$261.41	1.4%	$286.77
Street Light Tax	$67.05	0.4%	$122.16
Rent Board Fees	$314.40	1.9%	--
School Tax	$320.65	1.7%	$359.75
Fire Inspection Fee	$91.54	.5%	--
Mosquito Abatement	$1.18	0.006%	$7.15
Paramedical Care	$40.45	0.2%	$49.85
Vector Control	$10.06	0.1%	$30.60
EBMUD Wet Weather	$86.66	0.5%	$44.42
Total Taxes	$3,236.14	17.1%	$3,595.32
Gas (I.M.)*	$97.74	1.7%	--
Electricity (I.M.)*	$132.23	2.3%	--
Gas (M.M.)*	$518.80	6.7%	--
Electricity (M.M.)*	$389.44	5.6%	--
Rent Mean by Property	$479.11	--	--
Rent Mean by Units	$395.43	--	--
Mean Units/Property	3.98		
Median Units by Property	2		
Median Units by No. of Units	6		

*From aggregated data

Table III-4

IREM Expense Analysis for Residential Property in San Francisco: 1983-1988

	$/SQ.FT. GARDEN STYLE BUILDING	$/SQ.FT. 12 TO 24 UNITS BUILDING	$/SQ.FT. MORE THAN 25 UNITS BUILDING	$/SQ.FT. ACCORDING TO BERKELEY BUILDING TYPE DISTRIBUTION	EXPENSE RATIO PERCENTAGE
VACANCIES/RENT LOSS	$0.43	$0.46	$0.35	$0.41	4.7%
EXPENSES					
ELECTRICITY CA ONLY	$0.09	$0.07	$0.09	$0.08	1.0%
ELECTRICITY CA & APTS.	$0.09	$0.21	$0.17	$0.12	1.4%
GAS CA ONLY	$0.17	$0.21	$0.16	$0.16	1.9%
GAS CA AND APTS.	$0.16	$0.23	$0.18	$0.17	1.9%
WATER	$0.10	$0.07	$0.09	$0.09	1.0%
INSURANCE	$0.16	$0.25	$0.19	$0.17	2.0%
MAINTENANCE	$0.63	$0.74	$0.59	$0.60	6.9%
REAL ESTATE TAXES	$0.46	$0.44	$0.48	$0.45	5.1%
OTHER TAX/FEE/PERMIT	$0.01	$0.02	$0.01	$0.01	0.1%
MANAGEMENT FEE	$0.44	$0.47	$0.43	$0.43	4.9%
OTHER EXPENSES	$0.98	$0.86	$1.07	$0.96	10.9%
GPIN EXPENSE TOTAL	$3.04	$3.21	$3.15	$2.98	34.0%
TOTAL ALL EXPENSES	$3.18	$2.92	$3.25	$3.05	34.9%
NET OPERATING INCOME	$5.53	$5.09	$5.52	$5.27	60.3%
GPIN	$9.20	$8.71	$8.99	$8.75	100.0%

Table III-5

Recalculation of Operating Cost Ratios

Operating Expense	(A) prior weight	(B) percent increase since prior yr.	(C) $\frac{A \times (1.00 + B)}{1.00 + 1989\ g.a.}$	(D) 1988-89 weight
1. property taxes	.062	2.0%	$\frac{.062 \times (1.00 + .02)}{1.03}$	= .061
2. library assessment	.007	62.7%	$\frac{.007 \times (1.00 + .627)}{1.03}$	= .011
3. refuse collection	.031	0.0%	$\frac{.031 \times (1.00 + 0.0)}{1.03}$	= .030
4. water	.019	0.0%	$\frac{.019 \times (1.00 + 0.0)}{1.03}$	= .018
5. sewer maintenance (service)	.030	-.28%	$\frac{.030 \times (1.00 - .28)}{1.03}$	= .021
6. sewer treatment	.010	2.0%	$\frac{.010 \times (1.00 + .07)}{1.03}$	= .011
7. business license fee	.010	0.0%	$\frac{.010 \times (1.00 + 0.0)}{1.03}$	= .010
8. registration fee	.007	25%	$\frac{.007 \times (1.00 + .25)}{1.03}$	= .008

Table III-5 (continued)

Operating Expense	(A) prior weight	(B) percent increase since prior yr.	(C) A x (1.00 + B) / 1.00 + 1989 g.a.	(D) 1988-89 weight
9. insurance	.050	[assumed to be 5%]		= .050
10. management	.060	[assumed to be 6%]		= .060
11. maintenance	.133	5.0	$\frac{.133 \times (1.00 + .05)}{1.03}$	= .136
12. landscaping, park maintenance & street lighting	.019	6.4%	$\frac{.019 \times (1.00 + .064)}{1.03}$	= .020
13. gas - master meters	.048	21.8%	$\frac{.048 \times (1.00 + .218)}{1.03}$	= .056
individual meters	.021	10.6%	$\frac{.021 \times (1.00 + .106)}{1.03}$	= .023
14. electricity - master meters	.048	16.9%	$\frac{.048 \times (1.00 + .169)}{1.03}$	= .054
15. electricity - individual meters	.022	14.4%	$\frac{.022 \times (1.00 + .144)}{1.03}$	= .024
16. School tax - Prop. H	.020	4.8%	(new assessment last year)	.020

Table III-6

Recalculation Expense Percentages
Using Baar-Keating Methology
1989

	Individual Metered Units[1]	Master Metered Units[2]
Water	1.8%	1.8%
Sewer Treatment	1.1	1.1
Sewer Service	2.5	2.5
City Business License	1.0	1.0
Library Assessment	1.1	1.1
Refuse Collection	3.0	3.0
Property Taxes	6.1	6.1
Insurance Management	6.1	6.1
Maintenance	13.6	13.5
Landscaping & Street Lights	2.0	2.0
Rent Board Fees	0.8	0.8
School Tax	2.0	2.0
Fire Inspection Fee	0.5	0.5
Gas	2.3	5.6
Electricity	2.4	5.4

[1]Using the individually metered rent increase of 3.0%.

[2]Using the master metered rent increase of 3.5%.

Table I[illegible]
Operating Expense Ratios

	1989 RECALCULATION RATIO (RFF)	IREM 1983-1988 EXPENSE RATIO	IRA PETITION 1985-1989 RATIO	RANDOM SAMPLE RATIO	RECOMMENDED RATIO	SOURCE OF RECOMMENDED	RECOMMENDED MINUS RFF
WATER	1.4%				1.4%	RFF	0.0%
SEWER TREATMENT	1.1%				1.1%	RFF	0.0%
WATER AND SEWER TREATMENT		1.0%	3.4%				0.0%
SEWER SERVICE	2.1%			4.2%	4.2%	RAN	1.7%
CITY BUSINESS LICENSE	1.0%			1.1%	1.1%	RAN	0.1%
LIBRARY ASSESSMENT	1.1%			0.8%	0.8%	RAN	-0.3%
REFUSE COLLECTION	3.0%		2.3%	3.3%	3.3%	RAN	0.3%
PROPERTY TAXES	6.1%			7.2%	7.2%	RAN	1.1%
PROPERTY TAX--IRA a			11.2%				0.0%
PROPERTY TAX--IREM b		5.1%					0.0%
INSURANCE	5.0%	2.0%	6.5%		6.5%	IRA	1.5%
MANAGEMENT	6.1%	4.9%	9.5%		9.5%	IRA	3.4%
MAINTENANCE	13.6%	6.9%	8.6%		8.6%	IRA	-5.0%
LANDSCAPING AND STREET LIGHTING	2.0%			1.8%	1.8%	RAN	-0.2%
LANDSCAPING				1.4%	1.4%	RAN	
STREET LIGHT TAX				0.4%	0.4%	RAN	
RENT BOARD FESS	0.8%		2.4%	1.9%	1.9%	RAN	1.1%
OTHER TAX, FEES, PERMITS--IREM		0.1%					0.0%
SCHOOL TAX	2.0%			1.7%	1.7%	RAN	-0.3%
FIRE INSPECTION FEE	0.5%			0.5%	0.5%	RAN	0.0%
MOSUQITO ABATEMENT				0.0%	0.0%	RAN	0.0%
PARAMENDICAL CARE				0.2%	0.2%	RAN	0.2%
VECTOR CONTROL				0.1%	0.1%	RAN	0.1%
EBMUD WET WEATHER c				0.5%	0.5%	RAN	0.5%
TOTAL TAXES				17.1%			0.0%
GAS (I.M.)	2.3%	1.9%		1.7%	1.7%	RAN	-0.6%
ELECTRICITY (I.M.)	2.4%	1.0%		2.2%	2.2%	RAN	-0.2%
GAS (M.M.)	5.6%	2.1%		6.7%	6.7%	RAN	1.6%
ELECTRICITY (M.M.)	5.4%	1.4%		5.6%	5.6%	RAN	0.2%
GENERAL GAS			2.6%				0.0%
GENERAL ELECTRICITY			4.2%				0.0%
OTHER--IRA d			9.3%				0.0%
OTHER--IREM e		10.9%					0.0%
TOTAL EXPENSES, RANDOM SAMPLE, IM	23.8%			27.1%	27.1%		3.3%
TOTAL EXPENSES, RANDOM SAMPLE, MM	29.6%			35.5%	35.4%		5.8%
TOTAL EXPENSES FOR IM	51.0%	33.8%	60.0%	---	54.2%		3.2%
TOTAL EXPENSES FOR MM	56.8%	34.4%	60.0%	---	62.5%		5.8%
MONTHLY RENT COLLECTED/UNIT	$365.00	---	$402.43	$479.11			
MEAN NUMBER OF UNITS	4-6		8.59	3.98			

[a] PROPERTY TAX--IRA INCLUDES AN UNKNOWN AMOUN WHICH WAS EXPENDED ON REFUSE COLLECTION AND SEWER SERVICE.
[b] PROPERTY TAX--IREM IS NOT CLEARLY DEFINED ENOUGH TO DETERMINE WHETHER IT INCLUDES SEWER SERVICE CHARGES OR REFUSE COLLECITON
[d] OTHER IRA INCLUDES ADVERTSING, ACCOUNTING, LEGAL, AND "OTHER"
[e] OTHER--IREM INCLUDES RECREATIONAL AMENITIES, BUILDING SECURITY, OTHER ADMINISTRATIVE, AND OTHER OPERATING
[c] IN PAST YEARS, EBMUD WET WEATHER FACILITIES HAS BEEN INCLUDED IN THE WATER PORTION OF THE RECALCULATION BECAUSE IT WAS AT ONE TIME ON THE WATER BILL.

IV. OPERATING COST INCREASES SINCE JULY 1988

In this section, operating cost increases which took effect after July 1, 1988 are discussed. City rate increases which took effect on July 1, 1988, as well as cost increases occurring since July 1987, were discussed in last year's report.[1]

ESTIMATING INCREASES IN OPERATING COSTS

It is important for understanding this section that a consistent definition of operating expenses is used. Operating expenses are generally defined as expenses which are associated with the operation of the property. Mortgage interest and principle payments are not considered operating expenses.

The balance of gross income, which is left over after operating expenses, is "net operating income." "Net operating income" is the source of funds for debt service and cash flow from the property. The formulas relating these quantities are:

(1) Gross Income - Operating Expenses = Net Operating Income

(2) Net Operating Income - Mortgage Payments = Cash Flow

While net operating income ratios exhibit some degree of uniformity among properties, net income/gross income ratios vary enormously among properties according to the purchase date, the size of the down payment, and the type of financing associated with the property.

Since operating costs equal only about 40 to 50% of gross income, on the average, the rent increase required to cover increases in operating costs typically will equal approximately 40 to 50% of the inflation rate. (Some rent control jurisdictions which use the weighted operating cost methodology also include a partial inflation adjustment for the net operating income portion.)

Some types of operating cost increases can be precisely estimated. For example, increases in property taxes, water, and sewer rates are known and are largely beyond the control of landlords.

Other types of expenses are also governed by public rates, but may be partially in the control of landlords. For example, the city may raise refuse collection rates, but landlords may cut back on service levels. In instances where a city service is involved, bills for different years can be compared in order to determine average increases in expenditures.

Increases for other types of expenditures, including management and maintenance can only be estimated.

---

[1]Except sewer service charges

1. Water

The ratio of water cost to gross income has been estimated to be 1.8%.[2]

Effective June 1, 1988 EBMUD instituted drought rates as a reaction to the water shortage in their district. For a multifamily dwelling, they established a base amount of $0.88 per 100 cubic feet at 88% of 1986 use.

The increased rates for more than base amounts were as follows:

Next 10% of base.....$1.50
Next 10% of base.....$2.00
Next 10% of base.....$3.00
Next 10% of base.....$4.00
Use over 140% of base.....$6.00

There was no increase in the Elevation Charge from 12.5 cents per 100 cubic foot water unit in 1987-88 to 13.3 cents in 1988-89 for Band 2, and from 27.5 cents in 1987-88 to 29.3 cents in 1988-89 for Band 3.

Monthly meter charges remained the same for all size meters:

Water Rates

Monthly Meter Charges

	3/4",	1",	1 1/2"
July 1988	3.75	7.20	14.25
June 1989	3.75	7.20	14.25

Average water consumption is estimated to be 478 cu. ft./apt./month. (See Baar-Keating, Sept. 1982 report, p.IV-9.) Despite strenuous efforts, the authors were not able to obtain current water consumption data from either the City of Berkeley or BMUD. For the purpose of estimating the overall rate of increase, the rate of increase for a building of 6 units with average consumption is used. This practice was followed to maintain consistency with previous AGA calculations. However, this assumption fails to use the information on building size from the 1988 Bay Area Economics report, which provides a distribution of building sizes in Berkeley. In the case of water for this year, weighting the change by building size percentages would make no difference because there was no change in water rates. But for other years and for other related items, specifically sewer treatment, the difference can be substantial. If a six unit building consumed 28.68 water units the bill for 1988-89 and 1989-90 would be as follows:

---

[2]The operating expense ratios used in this section are the "recommended ratios" calculated in Chapter III.

WATER COSTS - HYPOTHETICAL 6 UNIT BUILDING

		Elevation Zones Band 1	Band 2	Band 3
Water consumption	'88-'89	27.66	27.66	27.66[3]
	'89-'90	27.66	27.66	27.66
Meter Charge	'88-'89	7.20	7.20	7.20
	'89-'90	7.20	7.20	7.20
Elevation surcharge	'88-'89	0	3.81[4]	8.40[5]
	'89-'90	0	3.81	8.40
Total/6 unit building	'88-'89	34.86	38.67	43.26
	'89-'90	34.86	38.67	43.26
Total/Apt Unit	'88-'89	5.81	6.45	7.21
	'89-'90	5.81%	6.45%	7.21%
	% increase	0	0	0

For the purposes of calculating the overall water cost increase, the average increase is estimated to be 0%.

Drought Water Consumption

In previous reports, it has been assumed that water, gas, and electricity consumption have all remained constant year after year at the amounts estimated from the 1982 surveys. This is a useful simplifying assumption, because it avoids the necessity of re-estimating consumption amounts, which is generally difficult and time-consuming. Because of conservation efforts due to the drought, consumption declined greatly between July 1987 and July 1989. The decrease in water consumption means that total water costs for apartment units have increased by smaller percentages than water prices, and, in fact, in some cases have actually declined.

Last year, EBMUD indicated a 9% drop in water consumption for multi-family buildings in the entire District had occurred between July 1987 and July 1988. EBMUD indicated this year that lower consumption has continued. Since water rates did not change, the consumption amount does not affect the percentage change calculation for water. But the sewer treatment increase, calculated in the next section, is affected.

---

[3] (28.68 water units x .88) x $.88
+ (28.68 x .10) x $1.50
+ (28.68 x .02) x $2.00

[4] 28.68 x $1.33

[5] 28.68 x $.293

RENT INCREASE REQUIRED TO COVER INCREASE IN WATER RATES

Ratio		Pct. change		Pct. Rent Increase to cover cost increase
.019	x	0.0%	=	0.0%

2. Sewer Treatment

On July 1, 1988 sewer treatment rates were increased as follows:

	4 UNITS OR LESS		
	Service Charge	Strength Charge	Treatment Charge
July 1988	$2.35	$2.15/apt.	$.232/100 cu ft.
July 1989	$2.40	$2.34/apt.	$.232/100 cu ft.
Percent Increase	2.1%	11.1%	0.0%

	5 UNITS OR MORE	
	Service Charge	Treatment Charge
July 1988	$2.35	$.61/100 cu ft.
July 1989	$2.40	$.65/100 cu ft.
Percent Increase	2.1%	6.6%

In past reports the percentage increase has been calculated for a hypothetical apartment unit in a six-unit building. The apartment unit is assumed to use five water units (500 cu. ft.) per month; however, in view of the decrease in consumption attributed to drought rates, 4.34 water units/month was assumed. Following this procedure, for consistency, the percentage increase is calculated to be 5.9%.

	1/6 Service Charge	Charge for 4.34 Water Units	Total
July 1988	$ 0.39	$ 2.65	$ 3.04
July 1989	$ 0.40	$ 2.81	$ 3.22
Percentage Increase, 1988-1989			5.9%

RENT INCREASE REQUIRED TO COVER SEWER TREATMENT INCREASE

Ratio		% Increase		Rent Increase
.011	x	5.9%	=	.07%

3. Sewer Service

The sewer service charge (for the maintenance of the sewers) is a municipal charge. It is distinct from sewer treatment charges which are collected by EBMUD.

As the table below indicates, since July 1987 there have been substantial changes in sewer service charges. Rates for buildings of 5 or more units were changed from a volumetric calculation to a flat rate of $12.86/apt./month. The monthly amount expended on sewer service was estimated to be $21.80, based on the Baar-Keating water consumption per apartment (4.78 water units per month). This represents a 41% decrease in sewer service charges. For the purposes of this report, consistent with previous reports, a weighted average of the two percentage increases is used, based on the distribution of units by number of units in each building in the 1988 Bay Area Economics Report: .332 in buildings with 4 or less units, and .678 in buildings with 5 or more units. The weighted average is 27.4%. (It should be noted that although the weighted average procedure is consistent with past calculations for sewer service rates, it is inconsistent with the procedure used to calculate increases in water rates, for which a six unit building is considered the standard.)

Sewer Service Rates

	4 or fewer units	5+ units
June 30, 1988	$12.86/unit	$10.67 + 2.25/100 cu ft.
July 1, 1988	$12.86/unit	$12.86/unit
July 1, 1989	$12.86/unit	$12.86/unit
Percentage Increase	0%	-41%

Weighted average = (0%) (.332) + (-41%) (.678) = -27.4%

RENT INCREASE REQUIRED TO COVER INCREASE IN SEWER CHARGES

Ratio		% Increase		Rent Increase
.042	x	-27.4%	=	-1.15%

4. City Business License Fee

The ratio of the city business license fee is fixed by ordinance at a specified percentage of gross income.

The city business license fee for residential properties has remained at $10.81/$1,000 gross receipts or 1.1%. (Ordinance No. 5017) However, since license fees are tied to rental income, owners who

increased rents by the amount of last year's adjustment have incurred greater costs. Last year's adjustment was equivalent to a 3.0% increase for individually metered buildings, and 3.5% for master metered buildings.

Rent Increase Required to Cover Increase in City Business Lic. Fee

Ratio		% Increase		Rent Increase
0.011	x	3.0%	=	.03%
0.011	x	3.5%	=	.04%

---

5. Library Assessment

The ratio of the library assessment to gross income has been estimated to be 0.8%.

In July of 1988 the library assessment was increased from $0.03377/sq. ft. to $.07610/sq. ft., an increase of 62.7%.

RENT INCREASE REQUIRED TO COVER INCREASE IN LIBRARY ASSESSMENT

Ratio		% Increase		Rent Increase
.008	x	62.7%	=	0.69%

---

6. Refuse Collection

The ratio of refuse collection charges to gross income has been estimated to be 3%.

According to the Berkeley Department of Public Works, the refuse collection rates are based on two factors: the size and number of trash cans used. The rates have not increased since July 1988.

There has been on change in refuse collection charges.

RENT DECREASE REQUIRED TO COVER DECREASE IN REFUSE COLLECTION RATES

Ratio		% Increase		Rent Increase
0.033	x	0.0%	=	0.0%

---

7. Property Tax

The ratio of property tax to gross income has been established to be 7.2%.

Under Proposition 13, property tax increases are limited to 2% per year except upon sale of a property. In past years, for the purpose of calculating the annual general adjustments, it has been assumed that property taxes increased by this rate. However, the random sample showed a larger than expected (7.2% versus 6.1%) expense percentage for this item, probably because of reassessments due to building sales.

RENT INCREASE REQUIRED TO COVER INCREASE IN PROPERTY TAXES

Ratio		% Increase		Rent Increase
0.072	x	2.0%	=	0.14%

---

8. Insurance

During the last few years insurance costs have substantially increased. The rate increases have been the subject of wide publicity.

However, the insurance industry does not compile data on average insurance costs and cost increases for apartment owners. Insurance rate changes vary among companies and among the insured of each company. Four years ago, insurance industry interviewees indicated that obtaining a fairly precise estimate of the average increase was an impossible task. They emphasized that cost increases varied enormously among properties. Last year insurance industry representatives who were contacted were not able or willing to give figures for average insurance increases.

Companies have substantially different rates for small owner-occupied buildings which qualify for home owners' insurance, other smaller building insured as "personal lines", and larger buildings insured under "commercial" policies. Companies issue a variety of separate property and liability policies and combined insurance packages.

Insurance costs for individual buildings are dependent on a variety of factors, in addition to base rates, including: age of building, size of building, experience discounts, high risk surcharges. A change in any one or more of these rate setting factors can have varying effects on apartment owners. Insurance costs also may be increased as a result of companies refusing to renew policies and thereby requiring owners to obtain policies from other companies which charge higher rates.

As part of last year's study (as in the previous two years), owners of rental units were requested by phone to provide information about their insurance costs for the current and prior years. Because of the relatively low response rate of previous years, a combined mail and telephone survey was used last year. A letter was sent to the random sample selected, alerting the landlords that a phone call would be coming soon, and specifying the small amount of information that would

be requested, namely the insurance rates for the current and past years and the number of units in the building.

Despite the extra effort made last year, and despite repeated calls, a very high percentage (81%) of owners could not be reached or would not give out information or only gave partial responses.[6] This compares with a 40% refusal rate in last year's survey, and a 28% refusal rate in the year before that. Altogether only 21 usable responses were obtained.

Because of the likelihood that a survey would not have provided useful information in proportion to the resources expended to undertake it, an alternative method of estimating the percentage increase in insurance costs was used. An index of homeowners' insurance for the U.S. was obtained from the U.S. Bureau of Labor Statistics. This index is a special category of the overall CPI and is only available at the national level. For the period from June 1988 to June 1989 this index showed an increase of 4.7%. Given the difficulty of obtaining accurate insurance information and the expense of the surveys, it would perhaps be best to use either the national insurance index or the overall CPI for the San Francisco-Oakland metropolitan area in this and future years. For 1988 these two indexes are virtually identical.

The ratio of insurance costs to gross income has been estimated to be .065.

RENT INCREASE REQUIRED TO COVER INCREASES IN INSURANCE EXPENSES

Ratio		Rate of Increase		Pct. Rent Increase Required
Based on U.S. index of homeowners' insurance				
.065	x	4.7%	=	0.31%

9. Management

In calculating the 1983 general adjustment, the Board assumed that management costs increased by the amount of the prior general adjustment, based on the theory that management fees are usually fixed at a percentage of rental income (typically 6% in the real estate industry). In calculating the 1984 general adjustment, the Board concluded (in its general adjustment resolution) that there had been no increase in management costs due to the reduction in turnover of tenants.

---

[6]At a September 1988 meeting of the Annual General Adjustment Subcommittee, several owners indicated that they never would have given out information to strangers over the phone and suggested a mail survey. Typically mail surveys have much lower response rates, however, so in this year's survey, a letter to introduce the caller followed by a phone call was tried.

The 1985 annual general adjustment report recommended that:

> "if any assumptions are made about increases in management expenses in calculating this year's and future general adjustments, that a measure other than the prior year's general adjustment be used to calculate increases in management expenses... Otherwise, circular results will follow: a low general adjustment will lead to a low allowance for increased management expenses in the following year and a high general adjustment will lead to a high allowance for increased management expenses in the following year. If estimates of increases in management costs are made on the basis of an index, then it is recommended that either the Employment Cost Index for civilian workers or the CPI-all items less shelter be used. (In this report, the CPI-all items less shelter is used.)

It is also recommended that the management cost ratio be maintained at 6%, an industry average, for the purpose of calculating annual general adjustments. (This is a deviation from the process used to adjust other ratios, which are adjusted on annual basis in order to reflect the fact that operating cost ratios change when operating costs increase at a different rate than rents.)"

The CPI all items-less shelter, has been used as the measure of management cost increases in the past three years. However, the adjustment of the CPI that was made by the U.S. Bureau of Labor Statistics to correct the distortions that inclusion of the shelter component created in previous years makes it more appropriate to use the full CPI for the San Francisco-Oakland metropolitan area.

This year the CPI increased by 5.1%. This figure is used in estimating the rent increase required to cover management cost increases.

RENT INCREASE REQUIRED TO COVER INCREASES IN MANAGEMENT EXPENSES

Ratio		Rate of Increase		Pct. Rent Increase Required
0.061	x	5.1%	=	0.31%
0.095		5.1%	=	0.48%

---

10. Maintenance

In the September 1982 Baar-Keating report, it was estimated that the ratio of maintenance expenses to gross income was 20% (.20), and it was assumed that maintenance expenses increased by the rate of increase in the CPI-all items (11.2%). However, the use of the 20% ratio and the 11.2% rate of increase were made subject to a caveat that both of these figures seemed high. Subsequently, the Board adopted a staff analysis which assumed that maintenance expenses increased by the CPI-all items less shelter (8.5%). The argument for using the all-items less shelter index was that the all-items index was overly sensitive to changes in mortgage interest rates and house prices, which do not really influence maintenance costs.

In January 1983, the Bureau of Labor Statistics revised its methodology to reduce (but not eliminate) the weight of house purchase and new financing costs in its market basket of good which is used to calculate the Consumer Price Index- all items.

In January 1983, it was estimated that the maintenance expense to gross income ratio was .14 (14%). Rationale for adjusting the ratio are set out at length in the 1983 Baar-Keating report. The basis for the adjustment in the ratio was not that maintenance expenses had decreased, but rather that the prior year's ratio estimate was too high.

In the Baar-Keating 1983 report, following the procedure adopted by the Board in the prior year, it was assumed that maintenance expenses increased by the rate of increase in the CPI-all items less shelter (2.8%). If that assumption had been used, a 0.39% rent increase would have been required to cover increases in maintenance costs. However, at the end of its hearings the Board did not grant a rent increase. One of the bases for its decision was a report by Commissioners Brauer, Illgen, and Callejo which concluded that maintenance costs had not increased.

If it is assumed that during the period June 1988 - June 1989 maintenance expenses increased by the rate of increase of the CPI-all items less shelter, 5.1% then a 0.665% rent increase would be required to cover maintenance cost increases. Other conclusions and/or assumptions about the maintenance expense ratio or rates of increase in maintenance expenses would lead to other results. If a 20% ratio were used, the required rent increase would be 0.335 percentage points higher. The operating expense ratio for maintenance has been estimated to be 8.6%. The CPI-all items has been used to estimate the percentage increase in maintenance costs.

RENT INCREASE ESTIMATED NECESSARY TO COVER MAINTENANCE COST INCREASES

Ratio	Rate of Increase	Pct. Rent Increase Required to Cover Cost Increase

---

11. Landscaping and Park Maintenance Assessments

In the summer of 1982, the city instituted assessments for landscaping and park maintenance. These assessments are calculated according to square footage. The ratio of these assessments combined is estimated to be 1.4% of gross income.

Effective July 1989, the combined total of these assessments increased from $.06210 per sq. ft., to $.06610, a increase of 6.4%.

RENT INCREASE REQUIRED TO COVER LANDSCAPING AND PARK MAINTENANCE ASSESSMENT INCREASES

Ratio		% Increase		Rent Increase
.014	x	6.4%	=	.09%

---

12. Street Lighting Assessment

In the summer of 1982, the city instituted an assessment for street lighting. The random sample shows the ratio as 0.4% of gross income.

Effective July 1, 1989, there was no change in the assessment of $0.0210/sq. ft.

Ratio		% Increase		Rent Increase
.004	x	0%	=	0.0%

---

13. Rent Board Registration Fee

There was an increase in the Rent Board registration fee from $80/unit in September 1988 to $100/unit in September 1989. The random sample shows an operating expense ratio of .019.

Ratio		% Increase		Rent Increase
.019%	x	25.0%	=	.48%

---

14. School Property Assessment (Measure H)

In November 1986, an ordinance was passed which establishes an assessment of $0.07 per sq. ft. of improved real property.

Effective July 1989, the school property assessment was increased from $.0735/sq. ft. to $0.077 per sq. ft., an increase of 4.8%.

RENT INCREASE REQUIRED TO COVER INCREASE IN SCHOOL ASSESSMENT

Ratio		% Increase		Rent Increase
.020	X	4.8%	=	0.10%

---

15. Fire Inspection Fee

The fire inspection fee remains at $23.00 per unit, per yearly 15 minute inspection. There have been no increases since July 1986, when the fee was increased from $18.75 to $23.00.

RENT INCREASE REQUIRED TO COVER INCREASE IN FIRE INSPECTION FEE

Ratio		% Increase		Rent Increase
.005	x	0.0%	=	0.0%

---

16. EBMUD Wet Weather Fees

The East Bay Municipal Utilities District assesses a yearly charge for wet weather facilities on the county tax roll, a flat rate of $28.80/apt. unit up to 5 units, and $144 for more than 5 units. There was no change in the 1989 charge.

Ratio		% Increase		Rent Increase
.005	x	0.0%	=	0.0%

17. Gas

Since June 1988 gas rates have changed significantly. The rate for baseline consumption has increased 1.9 cents per therm, a 4.9% rise, and the rate for usage in excess of the baseline has increased 9.4 cents per therm, a 12.6% rise. The city's utility tax has remained constant at 6.5%.

Gas Rates

	Baseline	Excess
May 1984	$0.46298/therm	$0.70533/therm
August 1984	0.47433	0.74661
August 1985	0.40570	0.80821
June 1986	0.38672	0.74005
January 1987	0.38102	0.75007
June 1988	0.39970	0.84441
June 1989	0.44181	0.84204

The baseline quantity allowance also decreased slightly for summer usage:

Baseline Quantities (Therms Per Day)

	Individual Meters		Master Meters	
	Summer	Winter	Summer	Winter
November 1988	1.2	2.2	1.1	2.0
May 1989	1.2	2.1	1.0	1.8

In order to calculate the effect of the changes, 1987 average monthly consumption figures for individual and master metered buildings in Berkeley were obtained from PG&E. The rates for individually metered buildings apply to separately-metered common areas in a multifamily complex. These consumption figures were applied to the 1988 and 1989 rate structures to calculate the following percentage changes in costs:

	Individual meters (common areas)	Master meters
Percentage change in gas costs, 1988 - 1989	10.6%	21.8%

Cost increases for landlords will also depend on whether or not they pay for heat, because the ratio of costs to gross income will be affected. As has been pointed out in past reports, only about 12% of landlords pay for gas heat (See Baar-Keating, summer 1983 annual general adjustment report). However, estimation of the change in gas costs for landlords who pay only for hot water heating is problematic. Changes in rates varied at different levels of consumption. However, the impact of these changes on landlord costs are not well known because average consumption levels for units where the landlord supplies gas only for hot water heating are not known and have not been surveyed by PG&E.

The required rent increases based on these cost changes are as follows:

RENT INCREASE REQUIRED TO COVER GAS RATE INCREASES

Ratio		Rate of Increase		Pct. Rent Increase Required to Cover Cost Increase
Individual meters				
.017	x	10.6%	=	0.18%
Master meters				
.051	x	21.8%	=	1.11%

18. Electricity

Electricity rates have changed significantly since last year. The rate for Tier I (i.e., baseline) consumption increased 1.2 cents per kwh, an increase of 17.7%. The rate for Tier II (i.e., excess) consumption has also increased 1.2 cents per kwh, an increase of 5.9%. Baseline quantities for summer and winter usage stayed the same.

Historical figures for rates are given below. In 1987, Tiers II and III were combined for rate setting purposes, with a rate which was between the former Tier II and Tier III rates.

Electricity Rates

	Tier I	Tier II	Tier III
July 1984	$0.055	$0.071	$0.091
August 1984	0.063	0.082	0.106
April 1985	0.070	0.091	0.119
Sept. 1985	0.067	0.087	0.113
Sept. 1986	0.065	0.084	0.110
Jan. 1987	0.065	[.103]	
May 1988	.06898	[.12032]	
May 1989	.08118	[.12739]	

The change in baseline quantities is given below. Below the baseline quantity, the Tier I rate is charged, while above the baseline quantity, the Tier II rate is charged.

Baseline Quantities: Electricity

	Individual Meters		Master Meters	
	Summer	Winter	Summer	Winter
Nov 1988	7.6 kwh/day	8.7 kwh/day	6.6 kwh/day/unit	7.7 kwh/day/unit
May 1989	7.6 kwh/day	8.7 kwh/day	6.6 kwh/day/unit	7.7 kwh/day/unit

In order to figure out the combined effect of these changes on landlords' electricity costs, 1987 average monthly electricity consumption figures for Berkeley were obtained from PG&E. Figures were obtained for both individually metered and master metered buildings. Applying these consumption figures to the 1987 and 1988 rate structures produced the following changes in costs:

	Individual meters (common areas)	Master meters
Percentage change in electricity costs, 1988 - 1989	3.3%	14.4%

Individually metered buildings have a lower ratio of landlords' electricity costs to gross income than master metered buildings, because in such buildings the landlord generally pays only for electricity in

the common areas. The ratios and rent increases for electricity increases are as follows:

Rent Increase Required to Cover Electricity Rate Increases

Ratio		Rate of Increase		Pct. Rent Increase Required to Cover Cost Increase
Individual meters (common areas only)				
.022	x	14.4%	=	0.32%
Master meters (all)				
.054	x	16.9%	=	.91%

THE OVERALL RENT INCREASE REQUIRED TO COVER OPERATING COST INCREASES

Tables IV-1A and IV-1B show the individual percentage increases for each expense item and the rent increase needed to cover each item. Table IV-1A shows rent increases needed on the basis of the recommended operating expense ratios. For comparison purposes, Table IV-1B shows the same calculation for the operating expense ratios calculated using the RFF method. It may be seen that there is little difference between the overall rent percentage increases required under the two methods. For individually metered buildings, the rent increases required for operating expense increase parity is 2.6% using the recommended operating cost ratios and 3.2% for the RFF percentages. For master metered buildings, the required rent increase is 4.5% using the recommended operating cost ratios and 4.8% using the RFF ratios.

In order to facilitate comparison with prior years, Table IV-2 sets forth the rent increases permitted since the adoption of Measure D in June 1980.

Table IV-1A
Overall Rent Increases Required to Cover Operating Cost Increases

Expense	Ratio		Pct. Increase in Expense		Pct. Rent Increase Required
Water (drought consumption)	.013	x	0.0%	=	0.0%
Sewer Treatment	.011	x	5.9%	=	0.7%
Sewer Service	.042	x	-27.4%	=	-1.15%
City Bus. License	.011	x	3.0%	=	0.03%
Library Assessment	.008	x	62.7%	=	0.50%
Refuse Collection	.033	x	0.0%	=	0.0%
Property Taxes	.072	x	2.0%	=	0.14%
Insurance	.065	x	4.7%	=	0.31%
Management	.095	x	5.1%	=	0.48%
Maintenance	.086	x	5.1%	=	0.44%
Landscaping & Park Maintenance	.014	x	6.4%	=	0.09%
Street Lighting	.004	x	0.0%	=	0.0%
Rent Board Registration Fee	.019	x	25.0%	=	0.48%
School Tax (Measure H)	.017	x	4.8%	=	0.08%
Fire Inspection Fee	.005	x	0.0%	=	0.0%
Mosquito Abatement	.00006	x	*	=	0.00006%
Paramedical Care	.002	x	*	=	0.002%
Vector Control	.001	x	*	=	0.001%
EBMUD Wet Weather	.005	x	0.0%	=	0.0%
Gas (hot water only)	.017	x	10.6%	=	0.18%
Electricity (common areas only)	.022	x	14.4%	=	0.32%
TOTAL					**2.6%**

Table IV-1A [continued]

Expense	Ratio		Pct. Increase in Expense		Pct. Rent Increase Required
			Mastered Metered Buildings		
Gas heat and hot water	.067	x	21.8%	=	1.46%
Electricity (all)	.056	x	16.9%	=	0.94%
City Business License	.011	x	3.5%	=	0.04%
TOTAL					**4.5%**

*These items were left out of previous AGA calculations. Therefore the percent rent increase required to cover the cost equals the expense ratio itself.

Table IV-1B

OVERALL RENT INCREASES REQUIRED TO COVER OPERATING COST INCREASES

Expense	Ratio		Pct. Increase in Expense		Pct. Rent Increase Required
Water (drought consumption)	.013	x	0.0%	=	0.0%
Sewer Treatment	.011	x	5.9%	=	0.7%
Sewer Service	.021	x	-27.4%	=	-0.57%
City Bus. License	.010	x	0.03%	=	0.03%
Library Assessment	.011	x	62.7%	=	0.69%
Refuse Collection	.030	x	0.0%	=	0.0%
Property Taxes	.061	x	2.0%	=	0.12%
Insurance	.050		4.7%	=	0.24%
Management	.061	x	5.1%	=	0.31%
Maintenance	.136	x	5.1%	=	0.68%
Landscaping, Park Maintenance & Street Lighting	.020	x	6.4%	=	0.13%
Rent Board Registration Fee	.008	x	25.0%	=	0.2%
School Tax (Measure H)	.020	x	4.8%	=	0.10%
Fire Inspection Fee	.005	x	0.0%	=	0.0%
Mosquito Abatement	.00006	x	0.0%	=	0.0%
Paramedical Care	.002	x	0.0%	=	0.0%
Vector Control	.001	x	0.0%	=	0.0%
EBMUD Wet Weather	.005	x	0.0%	=	0.0%
Gas (hot water only)	.023	x	10.6%	=	0.24%
Electricity (common areas only)	.024	x	14.4%	=	0.35%
TOTAL					3.2%

Table IV-1B (continued)

Mastered Metered Buildings

Gas heat and hot water	.056	x	21.8%	=	1.22%
Electricity (all)	.054	x	16.9%	=	0.91%
City Business License	.011	x	3.5%	=	0.04%
TOTAL					4.8%

Table IV-2

Rent Board Annual General Adjustment 1981 - 1989

Year	General Adjustment	Operating Cost Analyses
1981	5% + (1.2% if landlord pays for heat)	Rent board a.g.a committee
1982	9% + $4-$16 if landlord pays heat and electricy (depending on apt. size)	Lebowitz report (a.g.a. committee)
1983	4.75% + (0.25% if landlord pays any gas or electricity)	Baar-Keating Report Staff Report
1984	0%	Baar-Keating Report Brauer, Callejo, Gross & Illgen analysis Gee, St. John analysis Board Resolution re: expenses
1985	2%	Baar Report
1986	3% + ($2.50/month)	Baar Report
1987	3.5%	Baar Report
1988	$25/month	Baar Report
1989	3.0% + (0.5% if landlord pays heat and/or electricity)	BPA Economics Report

V. CONCLUSIONS

Based on the findings in this report the authors make the following recommendations:

1. **The Berkeley Rent Board should consider using the recommended operating expense ratios as part of the input to this year's and subsequent year's AGA decisions**

The ratios calculated from primary data are likely to be more accurate than the ratios recalculated using the Ratio Recalculation Formula (RFF) method. Although the overall difference in the sum of expense percentages is not huge, it is substantial. Further, for several of the items, notably sewer service, property taxes, insurance, management, maintenance, and Rent Board fees, the differences are substantial.

2. **The Rent Board should recalculate the operating expense ratios from primary data at least every five years.**

The differences between the recommended and recalculated ratios are sufficiently great to show the need for periodic recalculation from primary data on a somewhat more frequent basis than was done in the past. Although the implications for a particular year's AGA increase of revised operating cost ratios may not be great, it must be remembered that the fact that an ratio recalculated using the RFF method is off line indicates that the past expense increases allowed for this item were inaccurate.

The frequency with which the recalculation should take place represents a balance between actual fairness and the perception of fairness of the process, on the one hand, and the cost of the update. Costs include both out of pocket expenditures and Rent Board staff time, which is inevitably needed if information is to be drawn from the IRA petitions and other Rent Board files. Given the size of the differences between the RFF ratios and the recommended ratios, an periodic recalculation at somewhat shorter intervals than the previous one appears desirable to the authors. However, this is matter of judgement by the Board, in which the views of all interested parties -- the landlords and tenants directly affected, as well as those paying the cost -- should be considered.

3. **The Rent Board should consider conducting special studies to more precisely determine the operating expense ratios and better sources of data for water, sewer treatment, and insurance.**

The current study encountered difficulty obtaining water consumption data from EBMUD or the City of Berkeley. Although such data were contained in the 1982 report, they were based on a small sample.

The area of insurance has been a particularly difficult one. Given the time and resources devoted to the current study, the best method has been to use the IRA petition data for operating cost ratios and the national index of homeowner's insurance costs (a component of the CPI) for the increase percentage. These data may be adequate for times with relatively little change in rates. However, given the recent referendum, Propostion 103, and subsequent regulatory changes, potentially affecting insurance rates in California differentially from the U.S., the use of a national index in the future may not be perceived as accuarate.

In these areas in particular, the Rent Board should consider enlisting the cooperation of landlords, tentants, insurance agents, and the agencies involved at an early enough stage in the process that there is time for meaningful cooperation.

4. The Rent Board should modify certain procedures in order to improve the accuarcy of data used for operating cost studies

A particular issue noted in chapter 3 was the occasional substitution of zeros for non-zero numbers on certain IRA petitions. While it appears that in some cases the zeros would not have affected the rent increases granted, because they were inserted for both the base year and the comparison year, the Rent Board staff should check closely that this was the case and avoid such practices in the future.

Other modifications to practices or data bases that could make the process of drawing information for the recalculation of operating cost ratios more precise and less time-consuming include the following:

- o the IRA decisions should define the difference between the value zero and the category "not applicable";
- o there should be an independent checking system for the addition and subtraction in the final decision to avoid typographical or mathematic errors;
- o a database should be constructed which the general information from the IRA Landlord decisions which includes address, number of units on the property, number of units involved in the decision, expense item breakout, net operating income analysis, and case disposition.

5. The Rent Board should consider checking how the differences that have been found between the recommended operating cost ratios and the recalculated ratios affected the past increases granted and making adjustments for past undershooting or overshooting as necessary.

The fact that the operating cost ratios for particular items are different from the RFF ratios indicates that there was some inaccuracy in past estimates of cost increases. The Rent Board should

analyze these and consider whether they indicate a need for adjustment in the current year's AGA.

6. The Rent Board and the public should consider whether the expense and controversy involved in using a weighted operating cost approach to the AGA process is worth the extra precision vis a vis the use of a simpler approach, particularly the use of CPI for the metropolitan area.

It is true that the weighted operating cost approach is more accurate than the CPI approach in priciple. But the WOC approach also involes time, money, and is the source of acrimony. The difference between the overall rent increases that would have been given over the past years using the San Francisco-Oakland CPI and the actual increases can easily be checked. This difference should be looked at. If it is small, and what is "small" is a matter of judgement, the public and the Board should consider switching over to the same method used by many other cities to avoid expense and controversy.

U.C. BERKELEY LIBRARIES
C101698001